Correspondence.

CORN CULTURE.

Remarkable Results Attained by an Intelligent Experimenter.

EDITOR PROGRESSIVE FARMER:—The soil on which the following experiment was tried is a yellowish clay, cheesy and friable under good cultivation. The area was 18x14 feet, or 1-175 of an acre. It slopes gently down to a wet-weather ditch 2½ feet deep that thoroughly drains it. Besides this, there are surface drains on each side, planked up and leading into the ditch. The lay and slope is east.

PREPARATION, PLANTING AND CULTIVATION.

In November the ground was coated over with stable manure, containing no litter, at the rate of about 25 cords to the acre. This was deeply spaded in and thus left to mellow with the unusual freezes that followed. Early in March the ground was carefully dug over with mattock-hoe, and any lumps of manure finely broken. The ground was worked entirely on a level from first to last and the holes into which the kernels were dropped were opened broad and deep, and at a distance of 3 feet each way. A little guano was worked into the soil in the holes, and 20 to 30 kernels spread out and covered with an inch of soil; the whole being from 2 to 3 inches below the general surface. Each hole thus became a seed bed upon which the sun had a full play. The corn was planted on the 16th of March, a gentle, warm rain fell in two or three days, the weather was warm, and in ten days the plants were up. They were lightly touched by frost, but were afterwards covered at night with wisps of hay until all danger was over. The plants grew off well and were thoroughly worked every few days, and gradually thinned down to 4 stalks in the hill; the position of each stalk being carefully chosen so as to allow the most room. Most of the workings after this were with the mattock-hoe, deep and thorough. On the 11th of May the hills were manured with a mixture of guano and sulphate of ammonia, at the rate of 700 pounds of the former and 60 pounds of the latter to the acre, which was carefully hoed in around the plants. On the 12th of June an ounce of guano was applied around each hill, and the attempted pruning of the roots of all the rows, but one, began and continued from day to day, as the nodes and tassels would begin to swell.

THE WEATHER AND THE RAINS.

April was an entirely dry month, but on the 28th the rains began. From this date to the 5th of July there was rain on 26 days, and 15 days were wholly or partially cloudy, with much cool weather in May. During this period there were three rain floods, such as had not occurred in years, besides several heavy rain storms. For the entire period, covering pollination, silking and curing, the rains were so continuous and heavy, and the weather so murky, as to prevent perfect fertilization; whilst the worms and smut added to the injury. The yield was certainly cut short one-fourth from these causes. There was not sunshine enough during the 60 days to secure anything like a normal development. Nothing but the precaution of thorough drainage, assisted by deep and thorough cultivation at suitable intervals, prevented complete disaster. The experiment, though a complete failure as to results aimed at, still proves that even the rainiest season known for years may be so controlled as to give good results, though considerably below what was expected under more favorable circumstances.

PERIOD OF MATURITY.

This corn was planted on the 16th of March, was cut and shocked the 1st of September, and was ready for bread six months from the date of planting. The period of maturity must have been lengthened at least fifteen days by the unfavorable season.

RESULT OF THE EXPERIMENT.

First row (outside), 5 hills of 4 stalks each—20 stalks. Produced 25 ears; 15 on 15 stalks, and 10 on 5 stalks. Weight of shelled corn from 25 ears, 9½ pounds.

Second row, 5 hills of 4 stalks each—20 stalks. Produced 15 ears; 15 on 15 stalks and 5 barren. Weight of shelled corn from 15 ears, 6½ pounds.

Third row, 5 hills of 4 stalks each—20 stalks. Produced 17 ears; 17 on 17 stalks, 2 barren and 1 broken. Weight of shelled corn from 17 ears, 6¾ pounds.

Fourth row, 5 hills of 4 stalks each—20 stalks. Produced 16 ears; 16 on 16 stalks and 4 barren. Weight of shelled corn from 16 ears, 6½ pounds.

Fifth row, 5 hills of 4 stalks each—20 stalks. Produced 24 ears; 16 on 16 stalks and 8 on 4 stalks. Weight of shelled corn from 24 ears, 8 pounds.

Sixth row, 5 hills of 4 stalks each—20 stalks. Produced 21 ears; 15 on 15 stalks, 6 on 3 stalks, 1 barren and 1 broken. Weight of corn from 21 ears, 7 pounds.

Weight of damaged kernels from all, 2 pounds.

Total: 46¼ pounds from 1-175 acre.

Our experiment has given us, by actual weight, at the rate of 145 bushels of shelled corn to the acre. On examination we find that only 106 stalks out of the 120 bore anything. Suppose the barren and accidentally broken stalks had borne one ear each, this would have added 6 pounds more, giving us 52 instead of 46¼ pounds; or at the rate of 163 bushels to the acre.

DAMAGED KERNELS AND SMALL EARS.

A number of the ears were quite small and imperfectly fertilized, 1-20 of all the grains was damaged by the excessive rains, and the worms and smut damaged an equal quantity. Could all the 106 ears above weighed have reached their normal growth; and had each of the barren and broken stalks produced one normal ear each; and had there been no damaged kernels, the yield would easily have reached the rate of 200 bushels to the acre.

COMPARISON OF GRAIN WITH COB.

The weight of cob in this experiment was 5 pounds 10 ounces—about 1-8 of the whole. The usual allowance for weight of cob is 14 pounds to the bushel, and as we have 23-28 bushels in our experiment, the cob should be 11½ pounds. But the actual weight is a small fraction over half this. Upon examination of the kernels and cob, this wonderful difference is quite apparent. Our cobs are mere pipe stems, and the kernels are deep, sound and heavy. We propose increasing the weight of kernel to the maximum, while we will try to bring the stalk, fodder, shuck and cob to the minimum.

ROOT PRUNING.

It will be seen that the outside row in which there was no direct attempt at root pruning with the knife, produced the best result; though the fifth row made as many ears, lacking one, with a difference in weight of grain amounting to 1½ pounds. As we will proceed to show, this great difference in gain by the outside row can be attributed to nothing else than that it received more of the sunshine of the 15 clear days and those that were partially clear. On spading up the roots for examination after the stalks were cut down, it was found that all the roots, in all the rows alike, had grown directly downward; and that no signs of the 12 inch knife that had been passed vertically around each stalk at a distance of three inches were to be seen in the roots, As an explanation of this downward vertical direction of the roots, we have the fact that April was an entirely dry month. These roots also show, by their backward and decayed appearance, an excess of wet that told upon the health of the plants and their power of reproduction. Root pruning as a thing accomplished, has not entered into this experiment, and our belief that it must enter largely into the determining and fixing the number of ears has not been shaken.

POINTS IN SECURING SEED.

First, we must have seed with a great deal of vitality, ready to give a healthy plant for each kernel, and quick to grow off, with a deep color. Next, secure seed that will produce the most grain to the acre by weight. Our own observation and experience says have the cobs small; the kernels deep, sound and heavy; the stalks medium, and the shuck light. The writer is working for this: and he ventures the assertion, without fear of contradiction, that he can raise more grain by weight to the acre with the seed he is now improving, than can be done by seed selected from large cobs, huge stalks, and mammoth shuck. After fixing the type of ear, stalk, &c., the experiment should begin with reference to barrenness and the fixing the number of ears to the stalk. When we have rooted out barrenness, and caused *every* stalk to bear a fixed number of ears, not less than three, we should then begin a crowding system and continue it persistently until our seed will produce the maximum crop. Where the limit is no one knows. The writer does not think 250 bushels of shelled corn an impossible yield, and he yet hopes to see the day when he will produce it. The seed used in the above experiment was obtained from a friend. When given to this friend ten years ago by the writer, it had been very much improved by five years careful selection. Now it has sadly degenerated for the want of proper selection and cultivation, and the result is far below what it would have been. The writer intends continuing his experiments with the seed selected this season, and in ten years he hopes to have a *perfect* white corn, suitable to the southern country, that will produce from 100 to 250 bushels per acre, according to the soil, the preparation, method of planting, manuring and method of working.

THE LESSON.

The writer contends that what has been done on the 1-175 of an acre can be successfully done on an acre, and that what can be done on one acre can be done on every acre of good land, properly prepared, well cultivated, and with good seed.

Is there any sense, reason, or proof to the contrary on the side of doubting Thomases? It takes only a little careful experimenting to find out how little we really *know* and what wonderful facts lie within such easy reach.

D. C. ANDERSON.

Monroe, N. C., Oct. 2, 1886.

IT MUST DISGORGE.

EDITOR PROGRESSIVE FARMER:—Every good man in North Carolina rejoices in her prosperity and his State pride and love of home forbids him from interfering with any of the great enterprises which have for their object the betterment of the people. We are accustomed to the idea at least of investigating all political, social and industrial irregularities, and of holding *somebody* to to account if there be wrong doing in high places. There is no treason against the State, nor the powers that be in this, but it is simply a reiteration of the old doctrine that the government should be run in the interest of the people and to do the greatest good to the greatest number. The farmers of North Carolina are great in numbers, they are great in taxpaying, they are great in patriotism, they are the heart, soul and "back-bone" to the commonwealth, and yet how little is being done to help them while they are feeding the State and bearing the burden of her taxes! Oh yes, some will say, there is the Agricultural Department, established especially for the farmer, and the Experiment Station and more recently the Experiment Farm, of which Governor Scales said, when laying the corner-stone, that "it was the first ever laid in North Carolina in the interest of Agriculture." And what do you think, Mr. Editor, is the first step taken in "the interest of agriculture?" They tell us of the "physical study of soils," "temperatures," "moisture," and the "concurrent meteorological observations," all of which is so simple and is looked upon as a long stride towards high and progressive farming in North Carolina. It is so *clear* and easy of comprehension to the ordinary farmer, and applies so direct to his daily needs. Hurrah! for the concurrent concatenations of fortuitous circumstances superinduced by a succession of unparalled coincidences!

What the farmers of North Carolina want is simple, direct teaching how to perform the plain every day work on the farm to a profit and to have a school in which to educate their boys and girls so that when they begin life's work they will be prepared for it, so trained that they will know how to work and be *willing to do it*. Let us have the Agricultural and Mechanical college, wisely located and operated in the *interest* of the farmer. Let the PROGRESSIVE FARMER continue its brave and noble work until the University shall disgorge that $87,000 which of right belongs to the Farmers of North Carolina. Yours truly,

JOHN EDOM SMITH.

Newcome's, N. C.

Farm Notes.

WILLOW FARMING.

A willow farm in Macon, Ga., produces a ton of switches to the acre, commanding, when dried, $200 and as the leaves and bark sell at 25 cents a pound baled, the enterprise pays better than cotton.

HOW TO BUILD A CORN CRIB.

A little forethought displayed when erecting a corn crib to have it mounted on posts several feet from from the ground, and these capped on the top with inverted metal pans will save enough grain from the rats and mice each year to pay for the improvement.

STOCK QUICKLY PROFITABLE.

The pig is emphatically the poor man's friend, though it may be supplemented by the cow. More meat can be made from the pig with the same feed than with any other animal. Besides, pigs breed so rapidly that even small stock is quickly increased, and it is an animal that is always salable at something near its market value.

PERMANENT PASTURES.

Clover is excellent for the soil but it is not a good pasture on account of its instability. It cannot be depended on more than one year and is not good feed for milch cows even then. Cattle will turn any time from a field of thrifty clover to eat the shorter and sweeter herbage in fence corners where the plow has not recently disturbed it.

COMPOST IN WINTER.

If manure is made in large heaps and not compacted too much it will compost even in the coldest weather. If it is largely horse manure care must be exercised to prevent fire-fanging. The heap should be turned over when it shows too high a temperature. By turning once the part left on the outside at first may be subjected even in Winter to destroy most weed seeds.

SHEEP IN WINTER.

Ewes bearing lambs may be profitably turned out in open weather during Winter a few hours a day. The bite of grass they get, even if frost-bitten, is better than dry hay or straw. When the ground is frozen and free from snow sheep may be turned on Winter wheat or rye without injury to the crop if the pasturing is not excessively close. Many farmers believe that light pasturing of wheat is beneficial.

NOSE-BLEED.

The best remedy for bleeding at the nose, as given by a prominent physician at one of his lectures, is in the vigorous motion of the jaws as if in the act of chewing. In the case a child a wad of paper should be inserted to be chewed hard. It is the motion of the jaw that stops the flow of blood. This remedy is so very simple that many will be inclined to laugh at it, but it has never been known to fail in a single instance, even in the severest cases.

WARMING MILK.

The advantage in warming milk in Winter to make the cream rise rapidly and thoroughly is not generally understood. In a cold day the natural warmth is largely withdrawn before the milk is set in pans, and as most of the cream rises while the milk is cooling much of it remains in the milk unseparated. The temperature in warming should not be over 110° and from that down to 100°. Too great heat will break the butter globules prematurely.

DRESSED BEEF FOR NEW YORK.

Last year 200,000 carcasses of dressed beef were brought from Chicago to New York. This was one-third of the supply required by New York, Brooklyn and Jersey City, which, combined, constitute a population that in numbers ranks next to Paris if it does not exceed it. Every year our urban population increases faster than than the country on an average. Can the meat, and especially the beef, supply be kept up to meet this steadily increasing demand?

THE VALUE OF BONE.

The bone industry of the country is an important one. The four feet of an ox will make a pint of neats-foot oil. Not a bone of any animal is thrown away. Many cattle shin bones are shipped to Europe for the making of knife handles, where they bring $40 per ton. The thigh bones are the most valuable, being worth $80 per ton for making toothbrush handles. The foreleg bones are worth $30 per ton and are made into collar buttons, parasol handles and jewelry, though sheep's legs are the staple for parasol handles. The water in which the bones are boiled is reduced to glue, the dust which comes from sawing the bones is fed to cattle and poultry, and all the bones that cannot be used as noted or for bone black, used in refining the sugar we eat are made in fertilizers and help enrich the soil.

POTATO CULTURE.

A Pennsylvania farmer last year sold over $6.000 worth of potatoes from twelve acres. He fertilized with a compost of hard-wood ashes and oyster shell lime, plowed deep, planted medium sized, well formed uncut potatoes, three feet apart gave level cultivation and cultivated often. From one hill he took thirty-one fine large tubers.—*Journal of Agriculture.*

EFFECT OF COLD ON FATTENING PIGS.

In the feeding experiments at the Kansas Agricultural College there occurred unintentionally a condition that furnished a fair test of the effect of temperature on fattening pigs. Ten pigs were fed, nine were protected while one chanced to be in a projection of the pen, leaving it wholly exposed. In January there was a severe cold spell, and the exposed pig lost exactly six pounds while each of the other nine that were protected gained in amounts varying from five to ten pounds each. This little circumstance is sufficient to show the importance of keeping fattening pigs warm, or perhaps, what is equally well, and which is followed by many, fatten before any severe Winter weather arrives.

THE CAUSE AND REMEDY OF STREAKED BUTTER.

Butter is made streaked by uneven salting. Salt deepens the color of butter a little, and when it is not evenly distributed, the part which gets little or none is paler than that which gets the most, hence the streaks. It is no certain evidence that the salting is evenly done at all times because it is done by the same hand, for the same hand does not always do its work alike. If our friend wants to make a good job of it, he should not season his butter with salt at all. He should do it with brine. He should gather his butter in the churn not in a lump, but in granules, by stopping the churn when the butter has come enough to rise readily to the top of the buttermilk. Then draw off the buttermilk and rinse the butter in the churn with cold water till it will run off clear, and then immerse the butter in brine as strong as it can be made, and let the butter remain in it from one to five hours—better five than one and if it remains in 10 or 12 or 24 hours, it will do no harm, and in fact be all the better for it. By having the brine at about 60 degrees when the butter is taken out of it, the butter will be evenly salted and ready for pressing into a solid form for packing or for putting in any desired shape for use or market. He can in this way avoid streaky butter not only, but avoid working altogether, and thus secure the best possible quality to his product, and with the least possible labor.—*Prof. L. B. Arnold, in Farm and Home.*

STORE UP GREEN FOOD.

It has been discovered that ensilage, the same as that which is fed to cows is highly relished by the hens in Winter, and greatly promotes laying. As every poultryman cannot afford to have a silo, he cannot easily procure ensilage, but the short grass may be cut and cured, a few cabbages stored away, and even a small patch of young corn or oats may be grown, cut green, cured and laid aside for winter. One of the best modes of supplying winter food is to store turnips, carrots and small potatoes for hens. If cooked and thickened with ground grain the roots make not only a cheap food but one that is better than grain alone. Now is the time to think of such things if the hens are to be cared for in cold weather.

—The first Roman laws upon the observance of Sunday were especially in the interest of the working classes, and clearly manifest the influence of the new ideas in the Roman world. Thus one in 321 A. D. forbade other labors than those of the field on Sunday, and all civil, public acts except emancipation.